

Color, in alcohol, dark brown above; sides with a silvery luster; belly
e; body everywhere finely punctulate with dark dots; these extend
the vertical fins, which otherwise are entirely plain. No black spot
base of dorsal nor elsewhere on the fin.

This description is drawn from six specimens, varying in length from
to $2\frac{3}{4}$ inches. They were collected in a tributary of the Alabama
er, at Montgomery, Alabama, by Col. M. McDonald, of the U. S. Fish
Commission.

This species is closely related to *Notropis ardens*, *punctulatus*, and
ers constituting the subgenus *Lythrurus*. The absence of black
ekings on the dorsal well distinguishes it from most of these.

U. S. NATIONAL MUSEUM, August 13, 1884.

DESCRIPTIONS OF FOUR NEW SPECIES OF PŒCILICHTHYS IN THE UNITED STATES NATIONAL MUSEUM.

By DAVID S. JORDAN.

Pœcilichthys borealis, sp. nov.

Head, $3\frac{2}{5}$ ($4\frac{2}{5}$); depth, $5\frac{2}{5}$ ($6\frac{2}{5}$). D. VIII, 9; A. II, 7. Scales, 4-53-10;
lateral line with pores on 15 scales. Length (35747, Montreal, Canada),
inches.

Body moderately elongate, somewhat compressed, the caudal pedun-
rather long and stout, the general form resembling that of *P. artesiæ*
P. punctulatus. Head rather heavy, the snout bluntish, rather
longly decurved. Anterior profile gently and somewhat evenly
shed. Snout short, about half as long as eye, which is 4 in head.
with nearly horizontal, the lower jaw included, the maxillary ex-
tending about to opposite front of pupil, its length $3\frac{2}{3}$ in head. Teeth
all. Preopercle entire. Opercular spine strong. Premaxillary not
tractile. Gill membranes very slightly connected. A small black
lateral scale. Cheeks, opercles, and nuchal region scaly; breast naked.
scales of moderate size. Lateral line very short, not reaching last spine
dorsal, running rather high and slightly arched. Scales of belly
e those of the sides.

Dorsal fins well separated, unusually short and small; the longest
one in the largest example (♀ ?) $3\frac{1}{2}$ in head, in another one (♂ ?) $2\frac{2}{3}$
head. Soft dorsal a little higher than spinous dorsal, also unusually
all for this genus. Caudal long, truncate or slightly lunate, $1\frac{1}{2}$ in
head. Anal low and short, its spines high, the first highest. Pectorals
nearly as long as head, reaching past tips of ventrals.

Color in spirits: (male) dark gray (perhaps red in life) somewhat
mottled with darker; sides with 11 or 12 very distinct vertical dark
cross-bands (probably blue in life), each alternate one usually extend-
ing across the back, meeting its fellow of the opposite side; a dark

saddle-like blotch on back between dorsal fins; a dark bar before, behind, and below eye, radiating from eye, the suborbital bar most distinct; head with dark dots; spinous dorsal with a submedian, broad, dark band (otherwise pale); soft dorsal and caudal sharply barred with darker; about 5 dark bars across caudal; pectoral more faintly barred; lower fins pale, plain.

Another specimen, probably a female, is paler and grayer, with the cross-bars narrower and less regular; the markings on the fins are much paler, the first dorsal being without dark longitudinal band.

This species is based on five specimens, in good condition, collected at Montreal, Canada, by Mr. T. J. Doran. It may be known at once from all related species by the small numbers of rays in the fins. In life it was probably one of the most handsomely colored species of this beautiful genus.

2. *Pœcilichthys quiescens*, sp. nov.

Head, $3\frac{5}{6}$ ($4\frac{3}{5}$); depth, $6\frac{1}{8}$ ($7\frac{1}{3}$). D. XII, 11; A II, 7. Scales, 2-56-10; pores developed on 24 of them. Length (28509, Nashville, Georgia), 2 inches.

Subgenus *Boleichthys*, Girard.

Body extremely elongate, little compressed, the caudal peduncle long and rather deep, the back not elevated. Head moderately acute, the snout a little decurved, its length less than that of the eye, which is $3\frac{1}{2}$ in head. Mouth small, oblique, the maxillary reaching front of eye, its length 4 in head, lower jaw included. Teeth rather long. Preopercle entire. Opercular spine strong. Gill-membranes somewhat connected, meeting at an acute angle. No black humeral scale.

Cheeks and opercles scaly; nape and breast closely scaled. Scales rather small. Lateral line running very high, concurrent with the back, its tubes developed about to the front of soft dorsal.

Dorsal fins somewhat connected by membrane.

Spinous dorsal longer and higher than usual in this genus, the longest spines about half length of head. Soft dorsal a little higher and shorter than spinous dorsal. Caudal long, somewhat pointed, its middle rays $1\frac{1}{7}$ in head. Anal much smaller than soft dorsal, its spines rather long and slender. Pectorals shortish, $1\frac{1}{5}$ in head, not reaching to vent or to tips of ventrals.

Color in alcohol dark brown, with darker markings, as in *P. cos* and related species; a vertical row of small dark spots along base of caudal; dorsals and caudals cross-barred, forming fine checkers; a dusky blotch on front of dorsal; four dark streaks radiating from eye; cheeks and opercles with some dark points.

The type is a single, well-preserved specimen, 2 inches in length, collected in a tributary of the Altamaha River, a branch of the Suwannee, at Nashville, Ga., by Mr. W. J. Taylor.

The relations of this species are apparently with *P. cos*, from which it differs in the number of dorsal spines and in the greater union of the

gill-membranes. It is probably ornamented in life with blue and red, but no trace of these colors now remains.

3. *Pœcilichthys swaini*, sp. nov.

Head, $3\frac{2}{5}$ in length; depth, $4\frac{3}{5}$. D. XI, 12; A. II, 6. Scales, 3 or 4-41-7 or 8. Length (35308, Monticello, Mississippi), 2 inches.

Appearance of *Boleichthys*. Body fusiform, rather elongate, the back rather elevated anteriorly, the caudal peduncle moderate, somewhat compressed. Head rather slender and small, the anterior profile rather steep and gently curved, becoming more obtuse at the tip of the snout. Snout short, a little bluntish, its length 5 in head. Eye rather large, $3\frac{1}{2}$ in head. Mouth not very small, oblique, the lower jaw included, the maxillary reaching very nearly to opposite middle of pupil, its length $3\frac{1}{3}$ in head. Teeth rather strong, present on vomer. Preopercle entire. Gill-membranes very nearly separate. Opercular spine strong.

Opercles and cheeks well scaled. Scales of body rather large, ctenoid. Belly covered with ordinary scales. Nuchal region nearly naked. Breast naked. Lateral line wanting posteriorly on about two scales, anteriorly somewhat arched and concurrent with the back.

Dorsal fins contiguous but separate, both high, the soft dorsal shorter and higher than the spinous dorsal and much longer and higher than the anal. Longest ray of soft dorsal $1\frac{3}{4}$ in head. Caudal truncate, $1\frac{5}{8}$ in head. Pectorals moderate, $1\frac{1}{10}$ in head, not quite reaching vent. Ventrals coterminous with them, $1\frac{1}{3}$ in head.

Color in spirits, olivaceous, marbled with darker, the dark markings rather obscure and taking the form of dark quadrate spots about as large as the eye, and alternating so as to give a checkered appearance. The pale interspaces may perhaps have been of some bright color in life. Head with four dark stripes which radiate from the eye. A dark streak on anterior part of opercle. Spinous dorsal with a basal band of pale (crimson in life?); above this a dark band (probably deep blue); the outer edge of the fin broadly pale (scarlet?). Soft dorsal and caudal checkered with light and dark spots. Anal and ventrals plain, apparently bluish, the latter darkest. Pectorals plain. No black humeral spot.

A single specimen, in very good condition, except that the coloration has faded is in the National Museum, from a tributary of Pearl River at Monticello, Miss. The species is a *Pœcilichthys*, with the developed lateral line of *Nothonotus*.

4. *Pœcilichthys beani*, sp. nov.

Head, 4 ($4\frac{3}{4}$); depth, $5\frac{2}{5}$ ($6\frac{2}{5}$). D. VIII, 13; A. II, 7. Scales, 3-45-6. Length (35754, Lafayette County, Missouri), $1\frac{1}{5}$ inches.

Appearance of the species of *Boleichthys*, and evidently closely allied to *Pœcilichthys exilis*.

Body more elongate than in most species of *Boleichthys*, subfusiform, compressed behind, the back a little elevated; head slender, rather acute, the snout compressed, anterior profile little decurved; snout a

little shorter than eye, which is 3 in head; mouth moderate, a little oblique, the lower jaw included, the maxillary extending a little past front of eye, its length about $3\frac{2}{3}$ in head; preopercle entire; opercular spine well developed; gill-membranes very slightly connected.

Cheeks entirely naked; opercles well sealed; nuchal region and breast naked; lateral line almost complete, anteriorly somewhat arched and concurrent with the back; no black humeral scale; belly scaled like the sides, its scales a little smaller.

Spinous dorsal rather low and short, the outline rounded; soft dorsal long, a little higher than spinous dorsal; anal small, its spines very slender; caudal but little shorter than head; pectoral about as long as head, reaching somewhat beyond tips of ventrals, nearly to vent.

Coloration in spirits precisely like that of *Poecilichthys barratti*, olivaceous, mottled and tessellated with darker olive; a dark streak forward from eye; dorsal and caudal with bands of dark spots; other fins plain.

The single typical example was sent to the Museum from Tabo Creek, a tributary of the Missouri River, near Lexington, Lafayette County, Missouri.

The lateral line in this species and the preceding is so very nearly complete that its deficiency is useless as a generic distinction. Both species are evidently allied to the species called *Boleichthys*. This shows the extremely slight value of the characters used to separate *Nothonotus* from *Boleichthys*. Doubtless all these genera with short anal fin and non-protractile premaxillary (*Poecilichthys*, *Boleichthys*, *Nothonotus*, *Nanostoma* will have to be merged in *Etheostoma*).

The character of the union of the gill-membranes is similarly subject to intergradation among closely related species.

SMITHSONIAN INSTITUTION, August 15, 1884.

DESCRIPTION OF *Sciæna sciera*, A NEW SPECIES OF SCIÆNA FROM MAZATLAN AND PANAMA.

By DAVID S. JORDAN and CHARLES H. GILBERT.

In several papers in the Bulletin of the United States Fish Commission and the Proceedings of the United States National Museum we have mentioned specimens of *Sciæna vermicularis* from Mazatlan and Panama. In Bulletin of the United States Fish Commission (1881, p. 315) we have given a diagnosis of this species, comparing it with our Pacific *Sciæna*. All these references belong to a species which is not the original *Corrina vermicularis* of Günther, and which until now remains unnamed.

Sciæna sciera, sp. nov.

Sciæna vermicularis, Jordan & Gilbert, Bull. U. S. Fish Comm., 1881, 315 (not *Corrina vermicularis*, Gunther).

Head, $3\frac{2}{3}$ (4); depth, $3-3\frac{1}{2}$ (4). D. X, 1, 24; A. II, 7. Scales, 6-50